DORBIN

REFERENCE
MANUAL

WEATHERSTRIP MATERIALS

DORBIN
METAL WEATHERSTRIPS

ZINC—BRONZE—STAINLESS STEEL

- BRASS THRESHOLDS
- CALKING COMPOUNDS
- TOOLS — ACCESSORIES
- SPECIAL STRIPS
- DORCO PRODUCTS

DORBIN METAL STRIP MFG. CO.

2410 SOUTH CICERO AVENUE CICERO, ILLINOIS

DORBIN METAL WEATHERSTRIPS

TRADE CUSTOMS

TERMS: Cash, less 2%, or 25% with order to cover shipping charges. Balance C. O. D. 2% - 10 days - Net 30 days to accounts rated in Duns & Bradstreets. New accounts allow sufficient time for credit investigation.

PACKING: All orders less than $10.00 net — 25c packing charge.

DELIVERY: Standard equipments shipped within 24 hours from receipt of formal order.

SHIPMENT: Orders totaling less than 50 lbs. packed, shipped parcel post, or express. Over 50 lbs., truck or freight. Parcel post limits 70-lb. weight, 70" length.

MATERIALS

ZINC: Zinc is a pure metal—not alloyed. Is totally non-ferrous and is self-protecting from its zinc car carbonate coating. All "DORCO" strips formed in zinc are made from sheet zinc having a high tensile strength, sheared into correct size strips cut across the sheet grain, commonly termed, cross grain zinc, with maximum strip length of 60½".

COLD ROLLED BRONZE: Cold rolled Bronze, an alloy (90% copper, 10% zinc) is used in forming strips requiring spring—such as spring bronze door hooks, lock strips, etc. Also commonly used for rib strip and interlocking material because of its natural attractiveness and greater resistance to saline atmospheric conditions.

BRASS: Or Architectural Bronze, an alloy (56% copper, 41% zinc, 3% lead) is used for extrusion of shapes requiring great strength uniformity and wear resistance. Maintains permanent attractive appearance indefinitely.

RETURNS Full credit, less 10% allowed for standard goods undamaged and untarnished, less carrier charges involved. Scrap value less charges, allowed for return of special items.

GUARANTEE DORBIN unconditionally guarantees all items to be in exact accordance with catalogue data.

METAL GAUGES

STANDARD GAUGES

ZINC No.	ZINC Thickness	BROWN & SHARPE No.	BROWN & SHARPE Thickness
5	.010	34	.0063
6	.012	31	.0089
7	.014	30	.010
8	.016	28	.0125
9	.018	26	.0159
10	.020	25	.0179
11	.024	24	.0201
12	.028	23	.0225
13	.032	22	.0253

DECIMAL EQUIVALENTS

FRACTIONS OF AN INCH

Fraction	Decimal	Fraction	Decimal
1/64	.01562	5/32	.15625
1/32	.03125	11/64	.17187
3/64	.04687	3/16	.1875
1/16	.0625	13/64	.20312
5/64	.0781	7/32	.21875
3/32	.09375	15/64	.23437
7/64	.10937	1/4	.25
1/8	.125	3/8	.375
9/64	.14062	1/2	.5

DORBIN METAL WEATHERSTRIPS

DIRECTIONS FOR ORDERING DOUBLE HUNG WINDOWS

To fill orders correctly for double hung window material, it is necessary for us to have the following information:

No. 1 Width of sash
No. 2 Height of lower sash
No. 3 Height of upper sash
No. 4 Thickness of sash (1⅜", 1¾" or 2¼")

Please do not give glass sizes. Give sash measurements in even inches as we do not cut strips on the odd inch. For example: if your window measures 29" in width, take the next even inch which would be 30 inches.

All **DORBIN** weatherstrips are furnished ½" oversize to allow for any slight variation of the window or door. Therefore, if your measurement calls for a 36" strip, it will be sent 36½" without extra charge.

For stock we recommend 5 ft. lengths, as cross grain zinc strips, however, cannot be furnished in lengths over 60 inches. Ribbon zinc or cold rolled bronze strips can be furnished up to 16 ft.
Nails, dust blocks and packing strips are not included unless specified on order.

RECOMMENDED EQUIPMENTS

Unless you specify otherwise, the following zinc equipment will be furnished for double hung windows:

1⅜" sash	Tops	1"	Plain Rib (⅜" flange)	**No. 2P**
	Upper Sides	1⅜"	Corr. Rib (⅜" flange)	**No. 4C**
	Lower Sides	1¾"	Corr. Rib (½" flange)	**No. 7C**
	Sills	1⅜"	Plain Rib (⅜" flange)	**No. 4P**
	Meeting Rails		Hook and Flat	**No. M1-M2**
1¾" sash	Tops	1"	Plain Rib (⅜" flange)	**No. 2P**
	Upper Sides	1¾"	Corr. Rib (⅜" flange)	**No. 7C**
	Lower Sides	2⅛"	Corr. Rib (½" flange)	**No. 9C**
	Sills	1¾"	Plain Rib (⅜" flange)	**No. 7P**
	Meeting Rails		Hook and Flat	**No. M1-M2**
2¼" sash	Tops	1⅜"	Plain Rib (⅜" flange)	**No. 4P**
	Upper Sides	2⅛"	Corr. Rib (⅜" flange)	**No. 9C**
	Lower Sides	2½"	Corr. Rib (½" flange)	**No. 10C**
	Sills	2⅛"	Plain Rib (⅜" flange)	**No. 9P**
	Meeting Rails		Hook and Flat	**No. M1-M2**

DIRECTIONS FOR ORDERING CASEMENT WINDOWS

Give the width, height and thickness of sash and be sure to state whether casements are in-swinging or out-swinging. If casements are in pairs, be sure to mention what strip is wanted for the center. There are many different types of equipment for casement windows and it is always best to specify by catalog numbers just what you want. If no equipment is specified on your order, we will furnish our standard **DORBIN** casement equipment listed as follows:

In-swinging	Bottom	**No. 95**	Zinc Channel with Hooks
	Top, Lock Side and Center	**No. M6B** **No. M4B**	Spring Bronze Hook and Bronze Double Flat
	Hinge Side	**No. 15B**	Bronze El Rib
Out-swinging	Bottom	**No. 100**	Zinc Sill with Hook
	Top, Lock Side and Center	**No. M6B** **No. M4B**	Spring Bronze Hook and Bronze Double Flat
	Hinge Side	**No. 15B**	Bronze El Rib

DOORS

Give the width, height and thickness of the door. It is especially important to specify equipment desired on orders for door material. As we have many types of door bottoms, we have no means of knowing what is wanted unless your order specifies catalog number.

For doors exposed to severe weather conditions, we recommend the interlocking equipment listed under interlocking strips together with one of our waterproof brass thresholds. Doors not openly exposed can be effectively weatherstripped using spring bronze for the sides and top and, at the bottom, one of our thresholds or special door bottoms.

SPECIAL OPENINGS

Where unusual openings are encountered and you are uncertain as to the equipment to be used, it is best to give us a detailed sketch with dimensions of the opening so we can then recommend equipment that will be suitable.

SPECIAL STRIPS

Due to the fact that we maintain our own machine shop, we are enabled to make dies and equipment for rolling and stamping of special strips at a very small cost. Having all facilities available, we are in a position to give better than usual service on orders for special equipment.

DORBIN METAL WEATHERSTRIPS

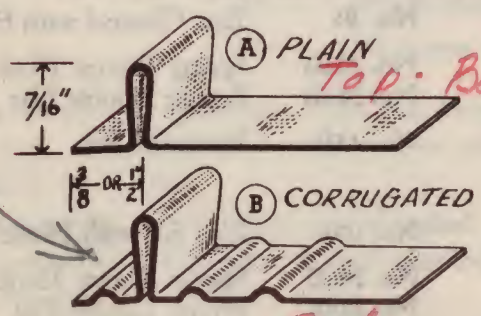
DOUBLE HUNG WINDOW EQUIPMENT

SCALE FULL SIZE

STANDARD RIB STRIPS

9 Gauge Cross Grain Zinc

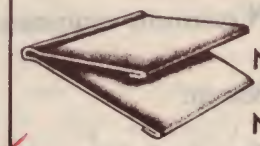
25 B. & S. Gauge Cold Rolled Bronze



WIDTHS (A) ¾", 1", 1⅜", 1½" 1¾", 2⅛" 2½"

WIDTHS (B) 1¼", 1⅜", 1⅝", 1¾", 1⅞", 2⅛", 2½"

CUSHION BRONZE



No. 123 — ½" wide

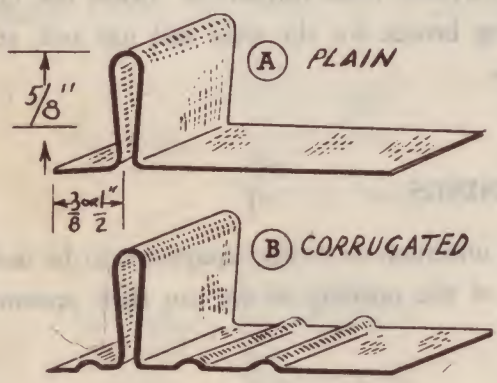
No. 124 — ⅝" wide

No. 125 — ¾" wide

No. 126 — 1" wide

HEAVY DUTY H Y-RIB STRIPS

10—12 Gauge Cross Grain ZINC



WIDTHS (A) ¾", 1", 1⅜", 1¾", 2⅛", 2½"

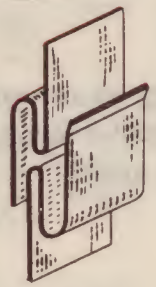
WIDTHS (B) 1¾", 1⅞", 2⅛", 2½", 2⅜", 2¾"

MEETING RAIL ASSEMBLIES

CROSS GRAIN ZINC—COLD ROLLED BRONZE

M1 M2

M3 M4



M5

M1 M4 B1

DORBIN METAL WEATHERSTRIPS

SCALE FULL SIZE

GROOVE LINER STRIPS

CROSS GRAIN ZINC — COLD ROLLED BRONZE

No. 20

No. 21

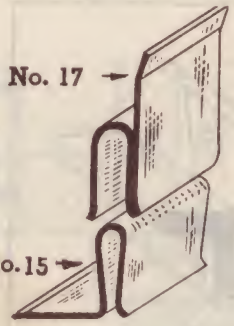
MEETING RAIL STRIPS

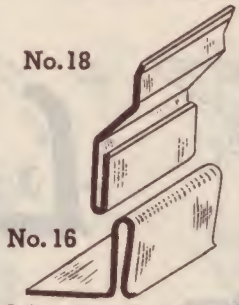
No. M 7,—¾" Wide

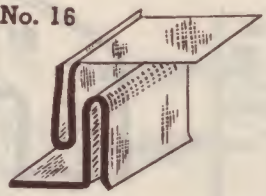
No. M. 8 1⅛" Wide

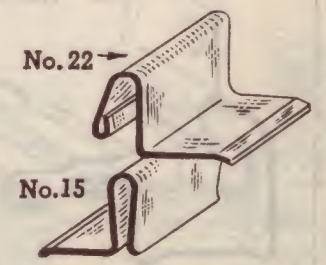
CASEMENT AND DOOR ASSEMBLIES

CROSS GRAIN ZINC—COLD ROLLED BRONZE





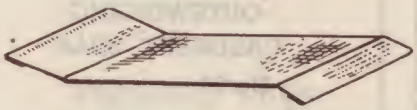




Refer to Page (4) For Other Interlocking Assemblies

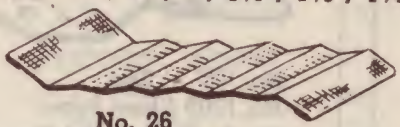
SPRING BRONZE

31B. & S. Gauge



No. 25—Spring Bronze

WIDTHS ⅝", ¾", 1", 1⅛", 1⅜", 1¾", 2⅛"

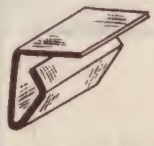


No. 26

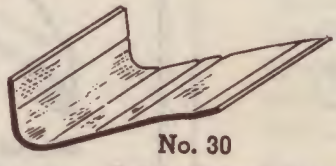
Spring Bronze

WIDTHS 1", 1⅛", 1¼", 1⅜", 1½"

SPRING BRONZE DOOR LOCKSTRIPS



No. 27—8" Long No. 27A—8" Long



No. 30

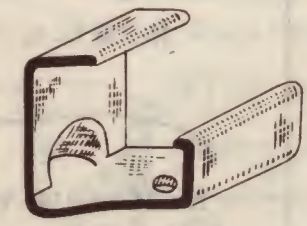
Spring Bronze Door Bottom

DORBIN METAL WEATHERSTRIPS

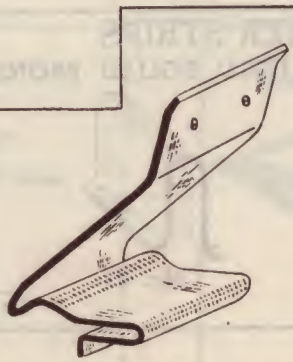
SCALE FULL SIZE

CASEMENT WINDOW EQUIPMENT

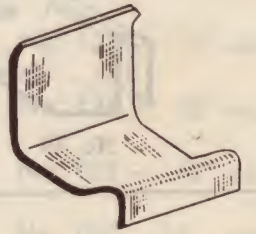
Inswinging Channel Assemblies



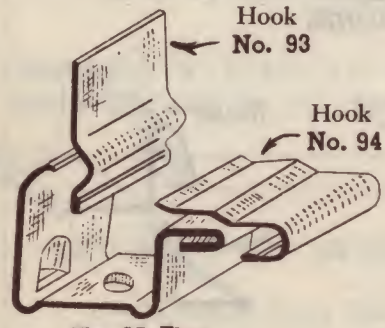
No. 96 Zinc
No. 96B Sheet Brass



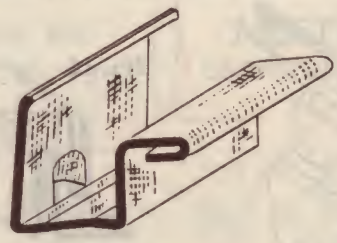
No. 97 Zinc
No. 97B Sheet Brass



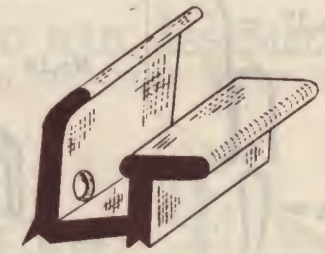
No. 98 Bronze



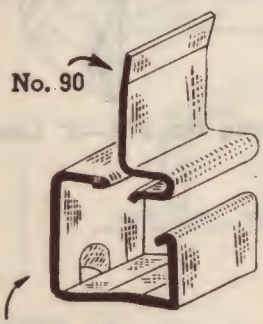
No. 95 Zinc
No. 95B Sheet Brass



No. 92 Zinc
No. 92B Sheet Brass

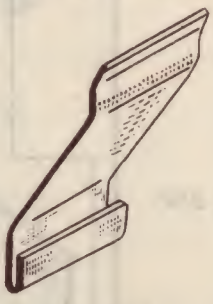


No. 99
EXTRUDED Brass



No. 90 Zinc
No. 90B Sheet Brass

WATER DRIPS



No. 102 Zinc
No. 102B Bronze
No. 102W Wood

OUTSWINGING
CASEMENT SILLS

No. 94

No. 100 - Zinc
No. 100B Sheet Brass
No. 51 Offset Solid Brass
No. 52 Square Face Solid Doors

DORCO-PLASTIC CALKING COMPOUNDS

Calking and Pointing Compounds

Applying gun grade to Window Frames.

DORCO calking and pointing compound is manufactured in two consistencies commonly labeled tool grade for application with a trowel or putty knife and gun grade for application with special automatic gun. Ingredients consist of a vulcanized like oil reinforced with pigments and long special asbestos fibres —assuring a strong—durable and water proof product having exceptional adhesive and elastic properties. Will not run, stain, crack or peel and the body is scientifically correct to absorb and hold the oil pigments—a factor not possible in cheap compounds. Stocked for immediate shipment in a variety of colors.

Gun Grade

5 gallon drums — 1 gallon pails
Colors—Gray—Natural—Brown
—Cream and White

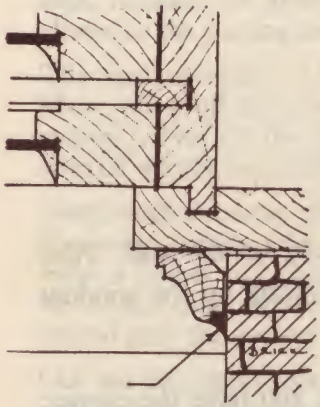
Knife Grade

50 lb. drums—25 lb., 12½ lb. and 5 lb. pails
Colors—Gray only

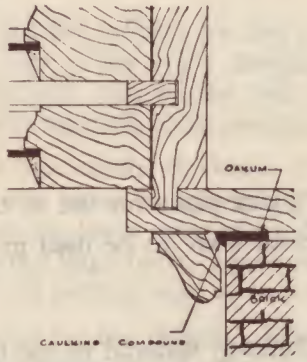
Calkers Oakum — Unspun Jute — 50 lb. bales or less

METHODS OF APPLICATION

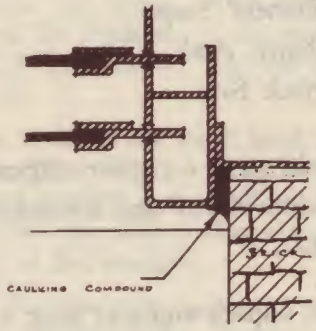
Jamb Details



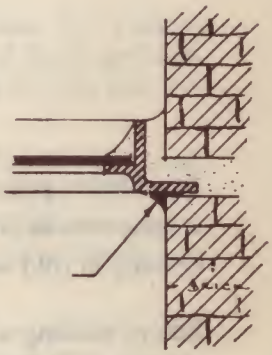
Method A.
Face of Staff Bead on Wood Frame



Method B.
Back of Staff Bead on Wood Frame.



Method C.
Face of Frame—plate-type steel window.



Method D.
Face of frame rolled-type steel window.

CALKING TOOLS

PRESSURE GUNS

No.	Make	Type	Size
32	Albion	Ratchet	2"x10"
45	Albion	Ratchet	2"x14"

POINTING IRONS

No.	Type	Size
503	Joint Filler	5"x¼"
505	Joint Filler	5"x⅜"

BEADING TOOL

No.	Type	Size
4	Concave Ends	⅜"x½"x8"

EXTRA NOZZLES

No.	Make	Size
2	Albion	3/16" Round
3	Albion	¼" Round
4	Albion	¼" Triangular
5	Albion	½" Round
6	Albion	½" Triangular
7	Albion	⅜" Round
8	Albion	⅜" Triangle
9	Albion	2½"x⅛" Seam
10	Albion	

GENERAL INSTRUCTIONS FOR INSTALLING DORBIN WEATHERSTRIPS

The instructions given here are intended as an aid to installation of DORBIN weatherstrips. However, we do not expect them to be taken too literally as no two mechanics work exactly alike; therefore, the instructions given here should be used somewhat as a guide and your own ideas for improvements in the method of doing the work should be tried out. Always bear in mind that the finest weatherstrip equipment will be ineffective unless properly and carefully installed.

Carefulness is more important than speed to the beginner. This means carefulness in handling furniture, drapes, etc., as well as carefulness in installing the strip. The floor cloth should always be used and all shavings gathered up at the end of the day. The question of speed is not entirely a matter of working fast, but of learning to do the work properly first.
To properly install DORBIN weatherstrips, your tool kit should contain the following tools:

Alumo Grooving Plane **No. 1-A** or Electric Grooving Plane
Alumo ½" Rabbet Plane, **No. 2-B**
Alumo ¾" Rabbet Plane, **No. 3-B**
Weatherstrip Claw Hammer
Saw Router
Tinners' Snips
Punch Awl
Hack Saw

In addition you should carry a regular carpenter's jack plane for use in trueing up the sash. Also a light canvas floor cloth 8'x10' and a window cloth 4'x6' to be used in covering up the window opening in cold weather.

Before starting a job, unpack and sort your weatherstrip material to see that you have the correct quantity and lengths of pieces for each opening. Distribute the material in the rooms you plan to finish each day. Before you begin the installation, examine all windows and doors for defects. Call the owner's attention to defective glass, sash cord, locks and other hardware as such defects must be corrected to guarantee perfect operation of weatherstrip equipment.

Most installers prefer to cut the metal for each window to fit before taking out the sash. The proper way to cut off a piece of zinc rib strip is to cut the rib in two with the point of the snips. Then bend the strip backwards to an angle of about 45 degrees at the point where the rib is cut. This will open the cut so that one stroke of the snips will complete it. By cutting rib strip in this manner, the ends of the strip are bent in so that it will lay close against the frame when put on, preventing splinters from getting behind it. Always pinch together the end of the rib at the top of the lower side strip and the bottom of the upper side strip, so there will be no danger of the strip catching in the wood.

EQUIPPING DOUBLE HUNG WINDOWS

(Zinc Rib Strip Equipment)

Examine the window carefully for peculiarities before you take out the sash. Each window will need different handling depending on how the sash was made, how it has warped or shrunk since that time. By "sizing up" the window carefully and taking note of these points, you will save yourself much unnecessary work. Take off the inside stops, starting in at the middle and working toward both ends, being careful not to mar the finish. In doing this, the claw hammer should be used, the points being placed on the side closest to the sash so that marks will not show.

Pull weights of the lower sash up as far as they will go and hold them there by either driving a nail in the cord or by tying cord in a slip knot. On small windows, this will not be necessary as the cord can be reached easily even when the weight is entirely down.

Take out the lower sash and set it aside. Now remove the left parting bead and take out the upper sash in the same manner as the lower. If either sash is warped or bowed away from the parting beads use the Alumo 2-B Rabbet Plane to straighten it so that it hugs the parting bead evenly through its entire length. When planing off the stiles of sash be careful not to plane off a strip so wide that it will show.

You are now ready to cut the weatherstrip groove. Use the grooving plane with the 5/32" bit and groove the upper sash, starting on the left hand side of the window. Next groove the sash for the head strip, running the groove in the direction of the side that you have already finished grooving. This will prevent chipping off the wood in the corner. Do the same thing on the right side of the sash, running the groove into the head strip groove. All grooves are made on the side of the sash closest to the parting bead.

The next operation is to cut the rabbets for the meeting rail strips. With the Alumo 3/4" Rabbet Plane, plane off the inside edge of the upper meeting rail the thickness of the metal of the large hook member. Nail on the hook strip, spacing the nails about 1 1/4" apart. Use the hack saw to saw the strip off evenly and flush with the ends of the meeting rail.

Next, with the same plane take off the thickness of the metal in the small hook or flat member from the lower outside edge of the lower sash meeting rail. Then use the Alumo 1/2" rabbet plane and make a rabbet 1/4" deep on the lower edge of the lower meeting rail. Nail on the small hook member in the same manner as the large hook. Make sure that the ends of the meeting rail strips do not extend past the surface of the parting bead at each side of the window.

Cut out the upper side strips for the pulleys. Where the side strip meets the head or sill strip, the side strip is mitered and the miter spread apart so that the rib of the sill strip or head strip can go into it. It is usually customary to do this mitering and to also snip off the corners of the side strips at the same time you are cutting out for the pulleys. Now put in the head strip, spacing the nails about 3" apart.

Nail in the upper right side strip with a nail at the bottom and top and a nail above and below the pulley slot. Hang the sash, then place the upper left side strip in its groove and slide both the sash and strip into the frame, adjusting the side strip to fit over the head strip. Complete nailing on both side strips and then replace the left parting bead.

Use the saw router to cut a narrow groove 1/8" deep in the sides of the lower half of both parting beads. Fasten the lower right side strip in place by inserting the flange of this strip into this narrow groove, placing one nail at the top and bottom inner edge of the strip. Before nailing, make sure that the strip is the proper distance from the parting bead. This is all the nailing necessary on the lower side strips as the inside stops will hold them firmly in place.
Install the lower left side strip in the same way. Replace the inside stop, leaving about 1/16" clearance between the stop and the sash. Now nail on the sill strip, placing the nails 1 1/4" apart.

A small amount of paraffin on the sides of the parting beads and on the ribs of the side strips will help to make the sash slide easily up and down.

Casement Windows (Inswinging)

The important consideration in weatherstripping casement windows is to make them watertight. Experience has shown that the most effective equipment is the interlocking. This usually consists of two interlocking members on the top and lock side and the "El" strip on the hinge side, with channel equipment for the bottom.

The channel for the bottom is usually installed first. Our No. 95, three member channel is most commonly used and is probably the most effective.

Cut the stop off flush with the sill and then place the zinc channel in its proper place on the sill, first chiseling out the stop to allow the channel to fit properly at the ends. The channel is correctly placed when the top is flush with the stop. Caulking compound should be used under the channel and at the ends to make sure it is watertight at those points.

Rabbet the bottom of the sash in the manner shown on the illustration. Nail on the rear hook first, then nail on the spring bronze front hook, making sure that it interlocks along the entire lip of the channel.

Rabbet the sash on the lock side and top. Then cut a groove in the hinge side of the window 3/8" from the edge using the rib strip setting on your grooving plane. Nail the flat member to the lock side and top of window and then nail the hook member to frame, placing the nails about 7/8" apart.

The "El" rib on the hinge side is usually routed into the stop about 1/8" and, therefore, only a few nails are needed to hold it in place. Now hang the window and make sure that it interlocks properly at all points and operates freely. Round off edges of groove with the rabbet plane to allow smooth action.
Note: If Spring Bronze is to be used on the sides and top, it is installed in the same manner as on a door.

Double Casements

Double casements are equipped the same as single casements, excepting for the center. At this point, the hook and flat interlocking strips should be used, although spring bronze strips No.104, 105 or 106 can also be used effectively. A wood or metal astragal should also be used as an additional protection.

Casement Windows (Outswinging)

For the sides and tops of outswinging casements, the installation is the same as given for inswinging casements. There are a variety of equipments that can be used on the bottom but No.100 zinc sill with interlocking hook is the most commonly used. When this equipment is installed, the bottom of the window is rabbeted to receive the hook member and the zinc sill is screwed to the sill with round head brass screws.

Equipping Doors
(Spring Bronze on Sides and Top)
(Interlocking Brass Thresholds for Bottom)

The spring bronze strip is nailed to the jambs of the door so that the contact edge is about 1/8" from the edge of the stop. The important part of installing spring bronze on doors is to get it stretched properly so that there are no buckles in the contact edge. There is usually a small opening along the hinge side of the door and a wider opening along the lock side. In this case, pack out behind the hinges, with cardboard strips to throw the door over and equalize this space.

Put on the head strip first, making sure to have the ends square and flush with the jamb. When nailing spring bronze on doors, nails should never be spaced more than one inch apart. Otherwise, it will buckle between nails and allow the air to come through when door is closed against the contact edge.

Miter the top of each side strip. Then drive a nail near the top and another one inch below it.

Next, stretch the bronze by driving the scratch awl through the strip near the bottom and into the wood. Press downward with sufficient force to get the proper tension and leave the awl sticking in the wood. Drive one nail at the middle, one at the bottom and two in between. Now finish the nailing, spacing the nails not more than one inch apart.

After the strip is nailed on, it must be adjusted so that it touches the edge of the door at all points when the door is closed. If the bronze must be raised to make better contact, this can be done by running a dull pointed tool down the crease of the nailing edge of the bronze with an even, firm pressure. Sometimes it may be necessary to go over the bronze several times to adjust it properly.

The strip for the lock side should be put on in two pieces, one above the lock keeper and one below it. A spring bronze lock strip is used to keep out the air around the keeper. This lock strip should extend an inch or so under the bronze strip at each end. Be sure to trim off the sharp corners of the bronze at this point.

Brass Threshold with Concealed Hook

To install the interlocking brass threshold, using the concealed hook, rabbet the door bottom to a depth of 1/4", leaving 3/8" thick strip of wood along the back of the door.
Nail on the concealed hook and place the brass threshold on the sill, and close the door from the outside. The brass threshold can then be pushed into the hook and the position marked when the hook and brass threshold are interlocking properly. Now open the door and fasten the threshold permanently with the brass screws.

Brass Threshold with Surface Hook

When installing brass thresholds with surface or "El" hook, the bottom of the door is sawed off to the proper point and the surface hook is fastened to the inside of the door with the proper screws. This equipment can be made more effective by nailing a 1" strip of spring bronze to the bottom of the door so that the contact edge will interlock with the lip of the surface hook.

Brass Threshold on Stone Sills

When installing thresholds on stone sills, it will be necessary to use a star drill to make holes for the screws. Lead screw anchors are placed in these holes. Be careful to mark the stone accurately so that the holes in the stone will line up exactly with the screw holes in the threshold.

Spring Bronze Door Bottoms

To install spring bronze door bottoms, make a groove about the width of a regular weatherstrip groove and about 3/8" deep in the bottom of the door. This groove should be made near the inside edge of in-opening doors and near the outside edge of out-opening doors.
Nail the door bottom in place so that the hook part works freely in the groove. Nails should be spaced 3/4" apart.

Brass and Felt or Brass and Rubber Door Bottoms

To install these door bottoms, simply close the door and fasten the door bottom so that the felt or rubber presses tight against the sill. The strip is fastened by using round head brass screws in the holes punched in the strip for that purpose. You will note that these holes are oval shaped so that the strip can be lowered later on should the door warp or shrink away from the threshold. To do this, simply loosen the screws and drop the strip down as far as necessary.

Circle Top Windows or Doors

If the zinc interlocking equipment is used, the zinc strip should be shaped to fit the arch of the window or door, by working it back and forth in the groove with pressure at each end. Where there is a sharp arch to the opening, it may be necessary to cut "V" shaped sections from the rib to make it bend enough to fit properly. Where spring bronze is used, cut pieces about two inches in length and nail them on so that they will lap over each other completely around the arch.

Transoms

Ordinarily spring bronze is used at all four sides of transoms. However, many installers prefer the interlocking such as our No. M1 and M2 interlocking hooks and No. 15 "El" rib. The No. 15 "El" rib is used at the hinge side and the interlocking hooks on the other three sides.

Metal Double Hung Windows

About the only effective equipment that could be used on metal double hung windows is an exterior interlocking. For example: our No. 15 and 17 strips. This equipment is secured to the inside of the lower sash and the outside of the upper sash by means of hardened sheet metal screws. To prevent the air from coming through between the screw holes, a thin felt should be glued to the base of the strips.
For the meeting rails of double hung windows, there are various equipments that could be used. Where the lock does not interfere, No. 15 and 22 can be used to advantage, and where the meeting rails are rabbeted, quite often a piece of felt can be glued in in such a manner as to be quite effective.

Unusual Openings

For unusual openings not covered by the instructions in this book, we would be glad to recommend suitable weatherstrip equipment if you will send us a detailed sketch of the opening.

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